

**UNITED STATES DISTRICT COURT  
DISTRICT OF MASSACHUSETTS**

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SCANSOFT, INC.,	)	
	)	
	)	
Plaintiff,	)	
	)	
v.	)	C.A. No. 04-10353-PBS
	)	
	)	
VOICE SIGNAL TECHNOLOGIES, INC.,	)	
LAURENCE S. GILLICK, ROBERT S.	)	
ROTH, JONATHAN P. YAMRON, and	)	
MANFRED G. GRABHERR,	)	
	)	
Defendants.	)	
	)	

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**DECLARATION OF WENDY S. PLOTKIN**

Wendy S. Plotkin deposes and states as follows:

1. I am an attorney in the law firm of Choate, Hall & Stewart, and a member of the bar of the Supreme Judicial Court of the Commonwealth of Massachusetts and the United States District Court for the District of Massachusetts. I am counsel to the above-named defendants and make this declaration in support of Voice Signal Technologies' Sur-Reply in Support of its Claim Construction Memorandum for U.S. Patent 6,501,966.

2. Attached hereto as Ex. 1 is a true and correct copy of a portion of the deposition transcript of Thomas Schalk.

\* \* \*

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct to the best of my knowledge and belief.

/s/ Wendy S. Plotkin

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Dated: June 16, 2005

# **Exhibit 1**

UNITED STATES DISTRICT COURT  
DISTRICT OF MASSACHUSETTS

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)  
SCANSOFT, INC., )  
)  
Plaintiff, )  
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v. ) C.A. No. 04-10353-PBS  
)  
VOICE SIGNAL )  
TECHNOLOGIES, INC., )  
LAURENCE S. GILLICK, )  
ROBERT S. ROTH, )  
JONATHAN P. YAMRON, )  
and MANFRED G. GRABHERR, )  
)  
Defendants. )  
)

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DEPOSITION OF THOMAS B. SCHALK, a witness  
called by and on behalf of the Defendants, taken  
pursuant to the applicable provisions of the Federal  
Rules of Civil Procedure, before Dana Ulrich Welch,  
CSR, Registered Professional Reporter, and Notary  
Public, in and for the Commonwealth of Massachusetts,  
at the offices of Choate, Hall & Stewart, 53 State  
Street, Boston, Massachusetts, on January 28, 2005,  
commencing at 9:18 a.m.

Job No.: 2197

**ORIGINAL**

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1 APPEARANCES:

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10 And: Jack C. Schecter, Esq.

11

Also Present: Daniel Roth

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## 1                           I N D E X

2

3                           WITNESS: THOMAS B. SCHALK                           PAGE NO.

4

5                           By Mr. Frank    4

6

7                           Certificate of the Reporter                           245

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## 10                           E X H I B I T S

11                           NO.                           DESCRIPTION                           PAGE NO.

12

13                           1 - ComTel '85 Documents                           25

14                           2 - Schalk Article                                   30

15                           3 - SpeechTech '86 Article                       54

16                           4 - Uniden Voice Dial Operating Guide           91

17                           5A- License Agreement                               133

18                           5B- Amendment to License Agreement               133

19                           6 - U.S. Patent 6,501,966 B1                   141

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1 PROCEEDINGS

5 WHEREUPON,

6 THOMAS B. SCHALK,

7 having duly sworn or affirmed that his  
8 testimony would be the truth, the whole truth,  
9 and nothing but the truth, testified as  
10 follows:

11                   MR. FRANK: I'm not quite sure what the  
12 previous arrangement has been, but we're  
13 prepared to stipulate that, although Mr.  
14 Schalk should read and sign the deposition,  
15 that it need not be -- his signature need  
16 not be notarized.

17                   And the only other agreement that I'd  
18       ask is if there are no corrections after  
19       30 days, that the deposition be deemed to  
20       have been signed in its then current form.

21 Is that acceptable?

22 MR. SCHECTER: That's acceptable.

23 DIRECT EXAMINATION

24 BY MR. FRANK:

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1 Q. Good morning, sir. Tell us your name,  
2 please.

3 A. Thomas Barton Schalk.

4 Q. Where do you live, Mr. Schalk?

5 A. In Plano, Texas.

6 Q. May I have the street address, please?

7 A. 6637 Muirfield Circle.

8 Q. Are you presently employed?

9 A. Yes.

10 Q. By whom are you presently employed?

11 A. ATX Technologies.

12 Q. What is your position at ATX  
13 Technologies?

14 A. I'm vice-president of voice technology.

15 Q. And as vice-president of voice  
16 technology, what are your duties, just in  
17 general?

18 A. I lead the voice automation team.

19 Q. Would you describe your educational  
20 background beginning with college?

21 A. I attended George Washington University  
22 and graduated in 1973 with an EE in -- or a BS  
23 in electrical engineering.

24 And then I went to graduate school at

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1 you to train it, you would instead attempt to  
2 dial or play back the phone number pending.

3 Q. So if you said a key word like "home"  
4 or "office," it would determine whether there  
5 was a previously stored telephone number  
6 associated with that word. And if it  
7 determined that there was such a phone number,  
8 it would then pass that phone number off --

9 A. It would attempt to dial whatever was  
10 programed in association with the target  
11 designations like "home," "office" and so  
12 forth.

13 Q. And is it correct that the Uniden  
14 system included or employed a speech  
15 recognition method?

16 MR. SCHECTER: Objection.

17 THE DEPONENT: A speech recognition. A  
18 speech recognizer was used in the Uniden  
19 phone that's described in the operating  
20 guide.

21 BY MR. FRANK:

22 Q. Okay. Is it correct that the Uniden  
23 phone utilized, and to be fair, I should point  
24 out to you I'm following the words of the

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1 claim, is it correct that the Uniden phone  
2 utilized a speech recognition method for a  
3 mobile telecommunications system?

4 MR. SCHECTER: Objection.

5 THE DEPONENT: Can you repeat that?

6 I'm trying to get the question.

7 BY MR. FRANK:

8 Q. Sure. Is it correct that the method  
9 incorporated in the Uniden system was a speech  
10 recognition method for a mobile  
11 telecommunications system?

12 MR. SCHECTER: Objection.

13 THE DEPONENT: Not a mobile  
14 communications system. It was an interface  
15 to the phone, to the dialing process of the  
16 phone.

17 BY MR. FRANK:

18 Q. What's the distinction that you're  
19 making?

20 A. Well, the phone, and like a destination  
21 that you're calling, I mean, that's all part of  
22 the telecommunications system. But this is an  
23 interface to the dialer, in the case of the  
24 Uniden phone.

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1 Q. Okay. Was the product that you called  
2 an off-board product, a speech recognition  
3 method for a mobile telecommunications system?

4 MR. SCHECTER: Objection.

5 THE DEPONENT: A speech recognition  
6 method for a mobile telecommunications  
7 system? In the context that the recognizer  
8 was designed to work or to work on speech,  
9 perform it's algorithm processing on speech  
10 generated over a mobile telecommunications  
11 network.

12 BY MR. FRANK:

13 Q. Okay. You distinguished before between  
14 what you called an on-board product and an  
15 off-board product.

16 A. Correct.

17 Q. Is it your testimony that the -- a  
18 speech recognition method for a mobile  
19 telecommunications system --

20 A. Let me just say, you're using verbiage  
21 from the patent claims which are not -- I'm not  
22 a patent expert. And you're using terms that  
23 are making it difficult for me to interpret.

24 Q. Yes. Except I'm trying to get your

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1 best understanding; that's all I can ask for.

2 A. But if you use different ways of

3 wording things, I can answer the questions

4 better.

5 Q. Unfortunately, I'm constrained by some

6 legal requirements to ask you some of these

7 questions this way.

8 A. And I'm not someone who is in a

9 position from a legal standpoint to interpret

10 some of the language.

11 Q. I'm asking from your perspective, both

12 as the inventor of this patent and as somebody

13 who's in the business. And I'm simply asking

14 for your understanding.

15 A. Okay. And I'm going to have to answer

16 the questions using terms I am comfortable with

17 and hoping that they match what you're

18 thinking.

19 Q. Okay. So let me ask whether a method

20 employed in the Uniden product, as described in

21 Schalk Exhibit 4, was a speech recognition

22 method for a mobile communications system?

23 A. The method employed in the Uniden

24 phone? Method, I'm not sure if you're talking

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1 about the method of speech recognition, the  
2 method associated with the logic of the call  
3 flows.

4 Q. The method of speech recognition.

5 A. The method of speech recognition is  
6 different in the Uniden phone than in a system  
7 -- it's not necessarily the same.

8 Q. And is it correct that the method, the  
9 speech recognition method used in the Uniden  
10 phone is, in your opinion, not a speech  
11 recognition method for a mobile  
12 telecommunications system?

13 MR. SCHECTER: Objection.

14 THE DEPONENT: In a general sense -- it  
15 depends on how you define it. The speech  
16 recognizer in the Uniden phone is designed  
17 to recognize speech going through the  
18 handset, the audio as its received.

19 You may have situations where you're  
20 speaking into a handset where the audio is  
21 transmitted to an off-board recognizer, the  
22 recognition would be different, details of  
23 the algorithm and such.

24 BY MR. FRANK:

1 Q. In your understanding is the speech  
2 recognition method used in the Uniden product  
3 described in Exhibit 4, a speech recognition  
4 method for a mobile telecommunications system?

5 MR. SCHECTER: Objection.

6 THE DEPONENT: System? It doesn't make  
7 a lot of sense to describe it that way.

8 The Uniden phone is an embedded speech  
9 recognizer that has direct input from a  
10 microphone and serves as an interface to a  
11 phone that is then part of a system.

12 BY MR. FRANK:

13 Q. When you say then part of the system,  
14 you're referring to --

15 A. A mobile -- when I think of mobile  
16 telecommunications system, I think of, you  
17 know, communications media, a way you can  
18 communicate from one phone to another phone.  
19 This is an interface to the dialing piece of  
20 the phone.

21 Q. Let me ask a question that may help  
22 clarify. You've described a system that Voice  
23 Control Systems developed for Brite Voice,  
24 McCaw --

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1 A. An application, yes.

2 Q. An application?

3 A. Yes.

4 Q. Was that a speech recognition method  
5 for a mobile telecommunications system?

6 A. Speech recognition method is not a term  
7 that I'm comfortable with.

8 There's speech recognition algorithm,  
9 the details of how you process the speech. But  
10 when you talk about a speech recognition  
11 method, I'm not sure. I need another way for  
12 you to describe that; that's really as simple  
13 as that.

14 Q. Was it a speech recognition system for  
15 a mobile telecommunications system, meaning  
16 hardware and software together, that is, the  
17 McCaw/MetroCell/Brite Voice product?

18 A. You could call it that. I'm just  
19 making the point that when the term speech  
20 recognition method, that doesn't -- that's not  
21 consistent with how I would describe a speech  
22 recognition algorithm or even a speech  
23 recognition unit in a system.

24 Q. Okay. Now, let me ask you -- withdraw.

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1 Q. Yes.

2 A. Yeah. The MIN is the cellular  
3 telephone number. So you've got voice going  
4 back and forth and data going back and forth  
5 when you're using a cellular phone. So the  
6 system knows your phone number as a way for,  
7 you know, part of your billing, you know, the  
8 phone number associated with your phone and  
9 then there's a serial number as part of the  
10 phone itself.

11 Q. Yes.

12 A. So the recognizer is not recognizing  
13 the phone number associated with your phone.

14 Q. Does the speech recognition system --

15 A. The application does. The speech  
16 recognizer, itself, doesn't. You may be  
17 meaning the application when you say speech  
18 recognition system. System is a broad term to  
19 me, for clarification purposes.

20 Q. Was the decision to move or to have a  
21 product where the voice recognition apparatus  
22 was located at or as part of the central  
23 switch, did that make it feasible to have a  
24 combined speaker-dependent and

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1 speaker-independent voice recognition system?

2 MR. SCHECTER: Objection.

3 THE DEPONENT: Actually, in my opinion  
4 the algorithms that came about, that were  
5 developed, could also be used on a system  
6 that was not an off-board application. The  
7 memory requirements turned out to be very,  
8 very small.

9 BY MR. FRANK:

10 Q. So it's your opinion that it was the  
11 algorithms developed by your group that made it  
12 feasible to have the combined system?

13 MR. SCHECTER: Objection.

14 Mischaracterizes.

15 BY MR. FRANK:

16 Q. I'm not trying to mischaracterize.

17 Correct me if I'm wrong.

18 A. We developed a way to extend our  
19 speaker-independent algorithm to operate in a  
20 speaker-dependent mode. The memory  
21 requirements to represent what we refer to as a  
22 template or a representation of something that  
23 someone speaks, like a name, the memory  
24 requirements for that were so small, the RAM

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1 requirements for an on-board solution, that it  
2 was practical to implement that on an on-board,  
3 meaning embedded, or off-board.

4 Q. And do you find that algorithm or that  
5 -- do you find that algorithm or that  
6 development -- withdrawn.

7 MR FRANK: Would you read the last  
8 answer to me so I ask the question in the  
9 terms that the last answer was articulated.

10 (The testimony referred to was read by  
11 the stenographer.)

12 BY MR. FRANK:

13 Q. And is that the method that you said  
14 earlier was maintained as a secret at Voice  
15 Control Systems?

16 A. Details were never disclosed. But some  
17 of the manipulation of the speaker-dependent  
18 representations, how you'd manipulate that and  
19 do the averaging, was shared with Brite, for  
20 example. But how the actual numeric  
21 representations were generated, how you got  
22 that, was never revealed.

23 Q. And there's nothing in this patent, the  
24 966 patent, that describes the method that you

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1 just referenced; is that correct?

2 A. The feature extraction process is not  
3 disclosed. And that's very relevant to how we  
4 generated the speaker-dependent representations  
5 of the words spoken. That type of information  
6 was not disclosed, to my knowledge, in patents,  
7 not the algorithms, per se.

8 Q. In the absence of the methodology that  
9 you just described, the stuff that was not  
10 disclosed, it's correct, is it not, that it  
11 would at the time of the application for this  
12 patent, been within the skill of people like  
13 yourself to develop a speaker, a combined  
14 speaker-dependent and speaker-independent voice  
15 recognition system, except that it would have  
16 required a lot more computing power and memory?

17 MR. SCHECTER: Objection.

18 THE DEPONENT: I can't paraphrase that  
19 question to myself. Are you saying that  
20 someone else could go off and copy what we  
21 did?

22 BY MR. FRANK:

23 Q. No. I'm saying based upon what was  
24 known in the voice recognition art or business

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1 as of the date of the application for this  
2 patent, is it correct that a person who did not  
3 have access to the methodology that you  
4 developed, could nevertheless, have had a  
5 combined speaker-dependent and  
6 speaker-independent voice recognition system,  
7 as long as that person had sufficient computing  
8 power available to them?

9 MR. SCHECTER: Objection.

10 THE DEPONENT: As long as you had  
11 sufficient computing power. In fact, I  
12 believe there were other implementations of  
13 hybrid recognition solutions,  
14 speaker-independent, speaker-dependent.  
15 You'd see it in the research labs.

16 BY MR. FRANK:

17 Q. So that was within the scope of what  
18 people in the business could do?

19 A. In theory. There was nothing  
20 preventing anyone from doing exactly what we  
21 did without us knowing it.

22 Q. That's as of when the first of these  
23 applications --

24 A. At any time.